

# **Virginia Saltwater Development Fund**

## **Evaluation of a Proposal for the Development of a Research or Data Collection Project**

**Project Number: 0607-09**

**Date:** \_\_\_\_\_

**Title:** Pilot Study: Application of pop-up satellite archival tags (PSATs) to assess postrelease survival, habitat utilization and short term movement of striped bass in Virginia's winter recreational fishery.

“The Virginia Saltwater Recreational Fishing Development Fund is to be used solely for the purpose of conserving and enhancing finfish taken by recreational anglers, enforcing laws related to natural resource conservation, improving recreational fishing opportunities, obtaining necessary data and conducting research for fisheries management, and creating or restoring habitat for species taken by recreational fishermen.”

Code of Virginia, Section 28.2-302.3

**NOTE: Please read the entire scoresheet before beginning, then provide comments, and circle ( ) the appropriate score for each item. Thank You.**

**A. Problem Description and Resolution (20 points)**

**1. Comment on the adequacy of the problem description, background information, knowledge of available literature/data sources, and anticipated benefits.**

The problem is well described. The investigators plan to study several aspects related to caught and released striped bass, using state of the art “tags”. The background section on life history and movements and the population and fishery contains many findings from studies that pre-date the resurgence of the striped bass population, and this information may not be characteristic of today’s vibrant population of striped bass. It may be that the background section reflects much of the current state of knowledge, and that means research on striped bass is not as prevalent as when there was a crisis situation. The section on post-release survival is interesting because the pop-up satellite tag (PSAT) would provide information on released striped bass, without the artificial aspects (holding pens, e.g.) usually associated with tag-and-release studies. The anticipated benefits will be a “snapshot” of the post-release survival based on two hook types and diurnal and longer movements of striped bass. Using this technology (PSATs) and limited number of tags is only going to reveal some minimal information on these events, but the small scale of

the study is warranted, as a pilot study and indicates the appropriate caution of the investigators.

**2. Describe your views on the conceptual approach to solve the problem.**

The investigators have experience using similar technology with marlin, so this proposal benefits from that work. It does seem this is a pilot study, as the investigators don't expect statistically significant results from type of tag use. The investigators document familiarity with the capabilities of the PSAT and will rely on an experienced fisherman to assist with the catch-and-tag process.

<b>SCORE (Circle one)</b>	<b>Poor</b>				<b>Excellent</b>
	<b>0</b>	<b>5</b>	<b>10</b>	<b>(15)</b>	<b>20</b>

**B. Soundness of Project Design/Technical Approach (25 points)**

**1. Is there sufficient information to technically evaluate the proposal?**

The investigators are familiar with the tag and the interpretation of data, based on previous work with other species and provided charts of this past work with white marlin. The investigator have centered on a "hot spot" of fishing activity and should be able to be selective for specimens to tag.

**2. What are the strengths/weaknesses of the project design (thoroughness, practicality, methods, integration with other work, etc.)?**

Since most previous studies using PSATs have involved larger species, the PSATs for striped bass do represent the first use of smaller PSATs. That is not necessarily a weakness, but it is a departure from earlier studies using larger PSATs. This proposed project should be successful, in terms of finding striped bass and receiving data on movements. Perhaps, there may be some qualitative information on differences between hook types, relative to post-release survival. However, since the study proposes 5 hooks each of J-hook and circle-hook type, differences between survival, based on hook type could be minimal.

<b>SCORE (Circle One)</b>	<b>Poor</b>					<b>Excellent</b>
	<b>0</b>	<b>5</b>	<b>10</b>	<b>15</b>	<b>(20)</b>	<b>25</b>

**C. Project Management and Experience/Qualifications of Personnel (15 points)**

**What is your opinion of the experience and capabilities of the Principal Investigator(s) to manage and conduct the work, the availability of facilities, and education and experience of assisting personnel.**

Two of the investigators have published papers that center on the exact approaches of this proposal: post-release survival, habitat utilization and movements, using marlin as the test subjects. Dr. Graves is a scientist of international repute. Mr. Horodysky has recent experience with similar projects, and Dr. Latour collaborated on a recent paper, involving this same methodology. Concerning facilities, Dr. Ken Neil is providing the tagging platform and has participated in previous work, of this type, with white marlin. It is a benefit that VIMS personnel have previously downloaded data from transmitting tags.

<b>SCORE (Circle one)</b>	<b>Poor</b>			<b>Excellent</b>
	<b>0</b>	<b>5</b>	<b>10</b>	<b><u>(15)</u></b>

**D. Project costs (15 points)**

**Is the budget realistic and reasonable? Indicate any unreasonable costs.**

The cost of the tags (\$4,000 each) gives one pause, but, in a way, this is partly an experiment to assess the capabilities of the smaller (reduced size) PSAT, and it appears the investigators have chosen an amount of tags that can provide some information on the feasibility of broadening this approach in the future. The supply, travel, and satellite time costs appear reasonable. In terms of personnel costs, it was not clear whether the indicated times of participation are strictly dedicated to this project. For example, will Mr. Horodysky dedicate 4 months solely to this project?

<b>SCORE (circle One)</b>	<b>Poor</b>			<b>Excellent</b>
	<b>0</b>	<b>5</b>	<b><u>(10)</u></b>	<b>15</b>

**E. Value of the Project to Fisheries Managers (25 points)**

**Do you believe the results of this project will further management of the species described? Will the results be useful to managers?**

This type of project, if broadened in scope and geographical extent, could provide a more representative measure of post-release survival, from fishing activity, of striped bass. It is understandable and appreciated that the investigators are using a cautious approach, in this scaled down, exploratory experiment with reduced-size PSATs. Similarly, testing of the effects of hook types on survival won't produce immediate, definitive results, given this reduced study, but it may provide some qualitative information on the expected (from other studies) conservation benefits

of circle hooks compared to J-hooks. Anglers have not readily embraced the use of circle hooks, but data from these types of studies should be collected, for future management consideration.

Concerning movement (diurnal and spatial) of striped bass, anglers may not think that type of information is necessary, given the sustained high abundance of striped bass, but it is useful information, since many studies on movements occurred when the stock was low in abundance.

<b>SCORE (circle one)</b>	<b>Poor</b>					<b>Excellent</b>
	<b>0</b>	<b>5</b>	<b>10</b>	<b><u>(15)</u></b>	<b>20</b>	<b>25</b>

**PLEASE ADD ANY FURTHER COMMENTS ON THE PROPOSALS  
BELOW:**